AMENDED PAGE 4 of the Specification with corrections marked up

Figure 2 shows the liquid jet 120 penetrating the outer layer of skin, stratum corneum 140. This successful penetration will result in decrease in impedance and thus signal a successful drug delivery.

Figure 3 shows the liquid jet 120 which fails to penetrate the outer layer of skin, stratum corneum 140. This unsuccessful penetration will not result in decreased impedance and thus signal a non-successful drug delivery.

DETAILED DESCRIPTION OF THE INVENTION

Referring to Figure 1, the electric circuit is formed between impedance monitor 150, patient's body, and liquid jet drug delivery device. Prior to the activation of liquid jet, the circuit is open and the impedance is very high, corresponding to open circuit impedance. The closing of the circuit is achieved by activating the liquid jet. Once the jet touched the patient's body, the circuit is closed and electric current can pass from the impedance monitor 150 into the drug delivery device nozzle 110 via wire 170 , then into the liquid jet 120, then into patient's body 130, then into the connection pad 160, then back into the impedance monitor via wire 180. Thus during the liquid jet drug delivery, the electric circuit is established and enabled to measure impedance.

Once the liquid jet touched the patient's body, the impedance is principally determined by patient's skin, particularly stratum corneum, which has highest electric resistance in the circuit.

(Currently Amended)

If the jet fails to penetrate the stratum corneum, the impedance monitor will measure relatively high impedance and will provide feedback indicating that the ~~grug deliver~~ drug delivery was unsuccessful.

By dynamically monitoring the impedance through the liquid jet, the depth of the penetration of the liquid jet can be estimated based on the different impedance properties of the tissue as one penetrates deeper into the body.